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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHOW, CHARLES CHIANG

ART UNIT

PAPER NUMBER

2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,780	Applicant(s) HEILIG, MARCUS	
	Examiner CHARLES CHOW	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 6/27/2005 is in compliance with the provisions of 37 CFR 1.97. According, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Taguchi [US 6,160,417].

For claim 1, Taguchi teaches an installation for exchanging information [Fig. 4, col. 1, lines 6-14] comprising a transmitter [44] supplied from a power supply [V1+V2 on 46], an electric cable [cable for 51] of which a first conductor is connected to a point of fixed potential GNDA of the transmitter [the ground potential for the io current return from ground 50/48 to ground terminal of V2, Fig.4, col. 10, lines 37-45] and

of which a second conductor [51] is connected to a point of variable potential of the transmitter [the variable potential at 45, via transistor 49, to supply voltage at 46 & the pulling down potential by transistor 50, col. 10, lines 29-45] and at least one receiver [53],

wherein the receiver or the receivers comprise a component [V2/V1] defining a threshold voltage opposing the flow of the electric current through the cable [the VTT has the voltage of V2, for the current i_0 which opposing the current i_i , Fig. 4, col. 10, lines 54-63].

For claim 2, Taguchi further teaches the wherein the component [V2] defining a threshold voltage [V2] opposing the flow of the electric current through the cable 51 [col. 10, lines 54-63] is a dry-cell or an electric accumulator [voltage generating 39 for V2, Fig. 4].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi in view of Houldsworth et al. [US 5,793,754].

For claim 3, Taguchi fails to teach the zener diode.

Houldsworth teaches the wherein the component [zener 52, Fig. 8] defining a threshold voltage opposing the flow of the electric current through the cable [opposing the current coming in from 41 to Rx 53] comprises a Zener diode [52] supplied with a continuous current [current from 45], such that between its terminals it exhibits a voltage substantially equal to its Zener voltage even in the absence of current in the cable [the zener voltage from 52 is generated from fixed power supply 24, transistors 45/49, & its surrounding circuit, Fig. 8], in order to easily control the current flow from data terminal 41 with a zener threshold voltage. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Taguchi with Houldsworth's zener threshold

Art Unit: 2618

voltage, such that the current flow from the data terminal could be easily controlled by a zener threshold.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi in view of Houldsworth, as applied to claim 3 above, and further in view of Dombrowski et al. [US 6,275,167 B1].

For claim 4, Taguchi, Houldsworth fail to teach the sum of the Zener voltage of the Zener diode and of the emitter-base voltage of a transistor whose emitter is linked to the anode of the Zener diode.

Dombrowski et al. [Dombrowski] teaches the wherein the threshold voltage opposing the flow of the electric current through the cable is the sum of the Zener voltage of the Zener diode and of the emitter-base voltage of a transistor whose emitter is linked to the anode of the Zener diode [the threshold voltage created by Z2 & the base to emitter voltage of Q13, in Fig. 7, to oppose the current coming from the Bus terminal, col. 6, line 43 to col. 7, line 7; for the different circuit application, anode can be coupled to the emitter of Q13], Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Taguchi, Houldsworth with Dombrowski's Z2 & Q13 for the threshold voltage, such that transistor turning on voltage is based on the zener threshold voltage.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi in view of Iyer et al. [US 6,593,768 B1].

For claims 5-6, Taguchi fails to teach the threshold voltage is greater than 2 volts.

Art Unit: 2618

Iyer et al. [Iyer] teaches the wherein the threshold voltage is greater than 2 volts [the voltage on the data line is 2.7 to 3.6 volts, USB 1.1 specification, col. 4, lines 12-42], such that the threshold voltage can be applied for the USB standard specification, for the USU application. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Taguchi with Iyer's 2.7 to 3.6 threshold voltage, such that the threshold voltage can be applied to the USB standard specification, for the USU application.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi in view of Houldsworth, as applied to claim 3 above, and further in view of Iyer-'768 B1.

For claim 7, Taguchi fails to teach the threshold voltage is greater than 2 volts.

Iyer et al. [Iyer] teaches the wherein the threshold voltage is greater than 2 volts [the voltage on the data line is 2.7 to 3.6 volts, USB 1.1 specification, col. 4, lines 12-42], such that the threshold voltage can be applied for the USB standard specification, for the USU application. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Taguchi, Houldsworth with Iyer's 2.7 to 3.6 threshold voltage, such that the threshold voltage can be applied to the USB standard specification, for the USU application.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi in view of Houldsworth, Dombrowski, as applied to claim 4 above, and further in view of Iyer-'768 B1.

For claim 8, Taguchi fails to teach the threshold voltage is greater than 2 volts.

Iyer et al. [Iyer] teaches the wherein the threshold voltage is greater than 2 volts [the voltage on the data line is 2.7 to 3.6 volts, USB 1.1 specification, col. 4, lines 12-42],

Art Unit: 2618

such that the threshold voltage can be applied for the USB standard specification, for the USU application. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Taguchi, Houldsworth, Dombrowski with Iyer's 2.7 to 3.6 threshold voltage, such that the threshold voltage can be applied to the USB standard specification, for the USU application.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. **Fowler [US 3,774,218]** teaches the opposing current Ineut in conductor 12, 14 [Fig. 1-2, abstract].

B. **Myers [US 6,914,597 B2]** teaches the high speed video data on twisted wire cable, with pulling up resistors for 140/100, for voltage applied to cable wires [Fig. 3, abstract].

C. **Philips [US 3,825,682]** teaches the balanced line driver/line receiver, with threshold voltage fro resistor 44/40 [Fig. 102, abstract].

D. **Decuir [US 5,781,028]** teaches the switched data bus termination [Fig. 7A, abstract].

Other prior arts are also considered. They are: **Bates [US 6,265,893 B1]**, **Urakawa [US 6,278,300 B1]**, **Teichmann [US 3,562,549]**, **Takada et al. [US 5,457,406]**, **Andrews et al. [US 3,585,399]**, **Chan [US 2003/0002,570 A1]**, **Aude [US 6,873,182 B1]**.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

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Charles Chow /C. C./
Examiner, Art Unit 2618
March 24, 2008.

/Edward Urban/

Supervisory Patent Examiner, Art Unit 2618